

PTO-1390 (Rev. 02-2005)

Approved for use through 3/31/2007. OMB 0651-0021

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A SUBMISSION UNDER 35 U.S.C. 371		ATTORNEY'S DOCKET NUMBER 53047-45121 U.S. APPLICATION NO. If known, see 37 CFR 1.14
INTERNATIONAL APPLICATION NO. PCT/US03/40148	INTERNATIONAL FILING DATE 3 December 2003	PRIORITY DATE CLAIMED 4 December 2002
TITLE OF INVENTION METHOD AND APPARATUS FOR AUTOMATED DETECTION OF TARGET STRUCTURES FROM MEDICAL IMAGES USING A 3D MORPHOLOGICAL MATCHING ALGORITHM		
APPLICANT(S) FOR DO/EO/US BAE, Kyongtae; JINSUNG, Kim		
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:		
<p>1. <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a submission under 35 U.S.C. 371.</p> <p>2. <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a submission under 35 U.S.C. 371.</p> <p>3. <input type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.</p> <p>4. <input checked="" type="checkbox"/> The US has been elected (Article 31).</p> <p>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2)) a. <input type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau). b. <input checked="" type="checkbox"/> has been communicated by the International Bureau. c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</p> <p>6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)). a. <input type="checkbox"/> is attached hereto. b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).</p> <p>7. <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)) a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau). b. <input type="checkbox"/> have been communicated by the International Bureau. c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired. d. <input checked="" type="checkbox"/> have not been made and will not be made.</p> <p>8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).</p> <p>9. <input type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).</p> <p>10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</p>		
Items 11 to 20 below concern document(s) or information included:		
<p>11. <input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.</p> <p>12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.</p> <p>13. <input type="checkbox"/> A preliminary amendment.</p> <p>14. <input type="checkbox"/> An Application Data Sheet under 37 CFR 1.76.</p> <p>15. <input type="checkbox"/> A substitute specification.</p> <p>16. <input type="checkbox"/> A power of attorney and/or change of address letter.</p> <p>17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821-1.825.</p> <p>18. <input type="checkbox"/> A second copy of the published International Application under 35 U.S.C. 154(d)(4).</p> <p>19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).</p> <p>20. <input checked="" type="checkbox"/> Other items or information: return postcard</p>		

This collection of information is required by 37 CFR 1.414 and 1.491-1.492. The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 15 minutes to complete, including gathering information, preparing, and submitting the completed form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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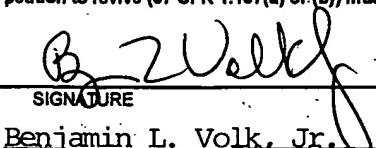
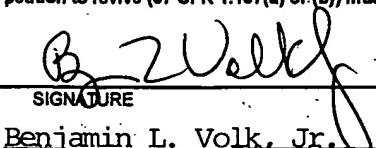
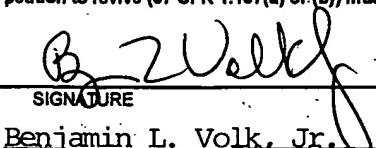
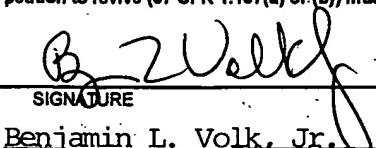
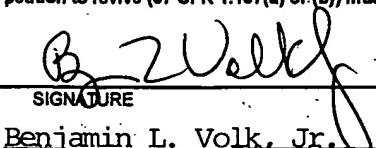
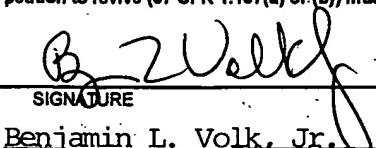
Annex US.II, page 2

PCT Applicant's Guide – Volume II – National Chapter – US

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MULTIPLE DEPENDENT CLAIM(S) (if applicable)	0		+ \$360	\$ 0																																																																																																																																																																																															
TOTAL OF ABOVE CALCULATIONS = \$ 4,000																																																																																																																																																																																																			
<input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by ½. 2,000																																																																																																																																																																																																			
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Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(l)).																																																																																																																																																																																																			
TOTAL NATIONAL FEE = \$ 2,000																																																																																																																																																																																																			
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property																																																																																																																																																																																																			
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a. <input type="checkbox"/> A check in the amount of \$ _____ to cover the above fees is enclosed. b. <input checked="" type="checkbox"/> Please charge my Deposit Account No. <u>20-0823</u> in the amount of \$ <u>2,000</u> to cover the above fees. A duplicate copy of this sheet is enclosed. c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>20-0823</u> . A duplicate copy of this sheet is enclosed. d. <input type="checkbox"/> Fees are to be charged to a credit card. WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.																																																																																																																																																																																																			
NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the International Application to pending status.																																																																																																																																																																																																			
SEND ALL CORRESPONDENCE TO:																																																																																																																																																																																																			
Benjamin L. Volk, Jr. Thompson Coburn, LLP One US Bank Plaza St. Louis, MO 63101																																																																																																																																																																																																			
 SIGNATURE <u>Benjamin L. Volk, Jr.</u> NAME 48,017																																																																																																																																																																																																			
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JC17 Rec'd PCT/PTO 03 JUN 2005

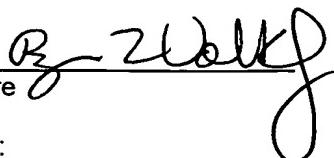
PATENT COOPERATION TREATY
IN THE UNITED STATES RECEIVING OFFICE

CERTIFICATE OF EXPRESS MAILING UNDER 37 C.F.R. § 1.10

I hereby certify that this correspondence and the documents referred to as enclosed therein are being deposited with the United States Postal Service on this 3rd day of June 2005 in an envelope as "Express Mail Post Office To Addressee" Mailing Label Number EV580750786US addressed to: Commissioner for Patents, MAIL STOP PCT, P.O. Box 1450, Alexandria, VA 22313-1450 – Attn: DO/EO/US.

Benjamin L. Volk, Jr.
Print or Type Name

Signature



In re international application of
BAE, Kyongtae et al.

International Application No.
PCT/US03/40148

: Authorized Officer

International Filing Date:
3 December 2003

For: Method and Apparatus for Automated Detection of
Target Structures from Medical Images Using a 3D
Morphological Matching Algorithm

Commissioner for Patents
MAIL STOP PCT
P.O. Box 1450
Alexandria, VA 22313-1450

Attn: DO/EO/US

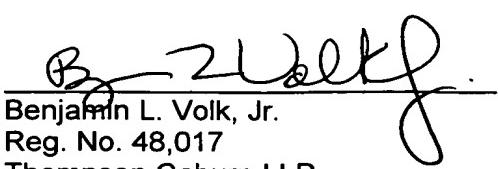
TRANSMITTAL

Enclosed herewith please find:

1. Transmittal Letter to the United States Designated/Elected Office (DO/EO/US) Concerning a Filing Under 35 U.S.C. 371;
2. Duplicate copy of this letter.

Please be hereby authorized to charge our deposit account 20-0823 for the required filing fees and file said national phase application.

Respectfully submitted,



Benjamin L. Volk, Jr.
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Thompson Coburn LLP
One US Bank Plaza
St. Louis, Missouri 63101
(314) 552-6000
(314) 552-7000 (fax)